

PROCEDURE: 3078	DATABASE ADMINISTRATION	DATE: 11/01/90
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TITLE: Rebuild User Owned Indexed Sets in IDMS
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Purpose

To inform ISD database facilities users of the procedures for rebuilding User Owned Indexed Sets in IDMS.

References

"IDMS/R Database Operations".
"IDMS-DB/DC UTILITIES(IDMSTBLU)".
"BOXES & ARROWS" May 90 issue available from Database Administration

Definitions

See PSA 2021 'Database Glossary'.

General Description

Indexed Sets, over time, will split and span new internal database records (SR8's) while the Index set is being used by the application(s). This splitting and spanning of new SR8 records results in many of them being only partially used. This ends up forcing additional reads and writes for the Index area and will only hinder the performance of the application as well as filling up the index area faster than expected.

It is therefore necessary to periodically rebuild index sets based on the activity performed on them. System Owned Indexed Sets are rebuilt with an IDMS utility called "IDMSTBLU". There is no utility available for rebuilding USER Owned Indexed Sets.

This generic program was therefore developed for rebuilding USER OWNED INDEXED SETS.

Job Control Language

JCL to execute the program can be generated from DBAID (see PSA 4143. It is called "RBLDINDX". It consists of 5 separate steps.

- Step 1 S079S000 - This step sweeps the owner area selecting all the User index owners and member dbkeys which are then passed to Steps 3 and 4. This step also erases the existing index structure during the rebuild operation.
- Step 2 Sort - Sorts the index structure from Step 1 for input to next step.
- Step 3 DBL3 - Stores the new index structure.
- Step 4 Sort - Sorts the owner and member dbkeys for next step.
- Step 5 DBL4 - Inserts the index pointer to the new index structure in the prefix of each data table row by performing a serial sweep of the area.

Operating Considerations

LOCAL MODE

This job must be run in Local Mode. IT IS STRONGLY RECOMMENDED THAT A BACKUP OF THE OWNER AND MEMBER AREAS BE TAKEN FIRST. If there are any database errors existing then this Rebuild function will halt and the backup file will have to be restored. A specifically written DMCL and subschema for this function is recommended so areas can be put into larger buffers thus reducing EXCP's and improving performance. Contact Database Administration for assistance.

This job is not restartable once the database has been updated; do not journal while running it.

Only one index can be rebuilt at a time with this program.

Coding Instructions

S079S000 accepts the following six parameter cards from SYSIN. The first five columns of each card contain the parameter keyword. Columns 7 through 22 contain the parameter value. Note that if a parameter is misspelled, the offending card is displayed and the program abends. If any parameter is omitted, an appropriate error message is issued and the program abends.

Parameter card	example
SUBSC=subschema name	L479HU10
INDEX=index-set-name	WRKRCAL-PRIORITY
OWNER=owner-record-name	WORKER-4254
MEMBR=member-record-name	WRKRCAL-4326
OAREA=owner's-area-name	WORKER-AREA
MAREA=member's-area-name	WRKRCAL-AREA
#####	#####

The last parameter card must contain '#'s in columns 1 through 6. This is required because the program uses "ACCEPT" statements to read the parameter cards instead of defining a file, opening it, and reading the cards from the file.

NOTE: THESE PARAMETERS WILL BE PROMPTED FOR BY DBAID ALONG WITH THE FILES ASSOCIATED WITH OWNER AND MEMBER AREAS.

KEYWORDS: IDMS IDMSTBLU IDMSTABX RBLDINDX S079S000 INDEXED SETS